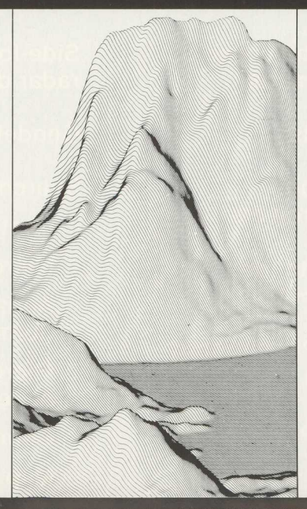
US GeoData

Digital elevation models ▶

Digital elevation models (DEM's) are digital records of terrain elevations for ground positions at regularly spaced horizontal intervals. Elevation data are available for many USGS 7.5-minute topographic quadrangles and all 1:250,000-scale maps within the 48 conterminous States, Hawaii, and for most of Alaska. For 7.5-minute data, the ground distance between digitized elevation points is 30 meters, and for 1:250,000-scale data, it is 3 arc seconds or 90 meters.



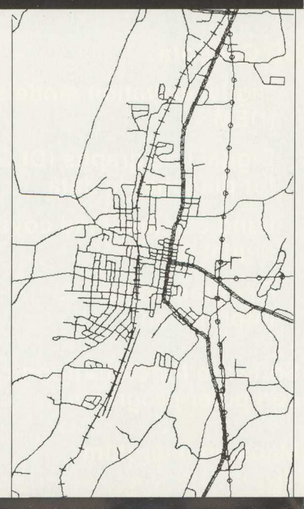
US GeoData

Digital line graphs ▶ for planimetric data

Digital line graphs (DLG's) are the digital representation of the planimetric information (line map data) portrayed on a map. DLG's are now available for some 7.5- and 15-minute topographic quadrangle maps and all 1:100,000-scale maps. DLG's for 1:2,000,000-scale maps are available for the entire United States.

Categories available are: (1) boundaries, (2) transportation, (3) hydrography, (4) U.S. Public Land Survey System, (5) hypsography*, (6) survey control*, and (7) manmade features*. Categories may be purchased separately or combined.

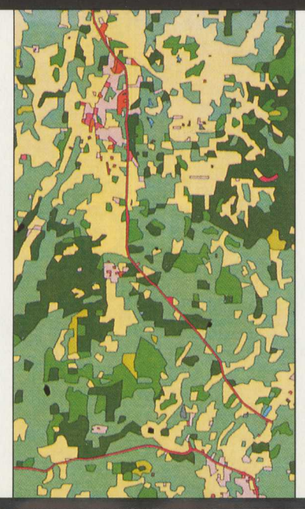
*These categories are available for only a select group of maps.



US GeoData

Land use and land cover ▶ digital data

Land use and land cover (LULC) digital data are derived from thematic overlays registered to 1:250,000- and 1:100,000-scale base maps. LULC data include information on urban or built-up land, agricultural land, rangeland, forest land, water, wetland, barren land, tundra, and perennial snow or ice. Associated LULC data include: (1) political units, (2) hydrologic units, (3) Federal land ownership, (4) census county subdivisions, and (5) State land ownership for some States.



US GeoData

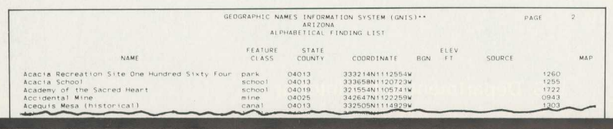
Geographic names information

The *National Geographic Names Data Base* is a computerized file of more than 2 million place names and geographic features—including towns, schools, parks, mountains, valleys, ridges, springs, streams, and reservoirs.

The USGS *Topographic Maps Data Base* contains descriptive information about the official name of each USGS 7.5-minute, 15-minute, 1:100,000-, and 1:250,000-scale maps. It includes current and historical map names, locations, reference corners, and scale.

The *Reference Data Base* provides information on every type of generic geographic feature found in compiling the *National Geographic Names Data Base*. It also includes annotated bibliographies of source materials used in compilation of the data base. Information is retrievable by custom searches.

This information from the Geographic Names Information System is available as listings, microfiche, and magnetic tape.



GEOGRAPHIC NAMES INFORMATION SYSTEM (GNIS)** PAGE 2
ARIZONA
ALPHABETICAL FINDING LIST

NAME	FEATURE CLASS	STATE COUNTY	COORDINATE	BGN	ELEV FT	SOURCE	MAP
Acacia Recreation Site One Hundred Sixty Four	park	04013	333214N1112554W				1260
Acacia School	school	04013	333658N1120723W				1255
Academy of the Sacred Heart	school	04019	321554N1105741W				1722
Accidental Mine	mine	04025	342647N1122259W				0943
Acequia Mesa (historical)	park	04013	332505N1114829W				1203

Software for cartographic computer programs

The USGS has developed and made available more than 15 software programs used in the National Mapping Program for the solution of geometronic problems in the fields of cartography, surveying, geodesy, remote sensing, and photogrammetry.

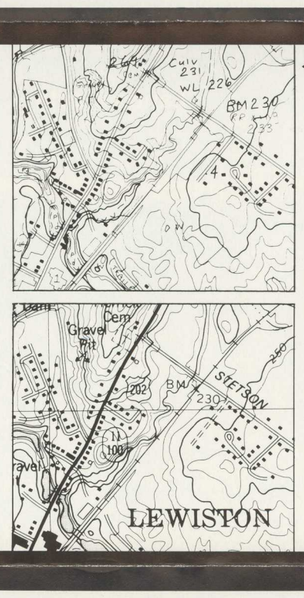
Software and documentation are available for a nominal charge to recover the costs of duplication.

Maps on microfilm

Current and out-of-print USGS topographic maps are available on negative 35-mm microfilm.

Rolls of maps on microfilm are useful for creating inexpensive, complete files that require little space.

Each roll contains approximately 500 maps at a reduction ratio of 20x. The rolls may be ordered on silver-based or diazo film.

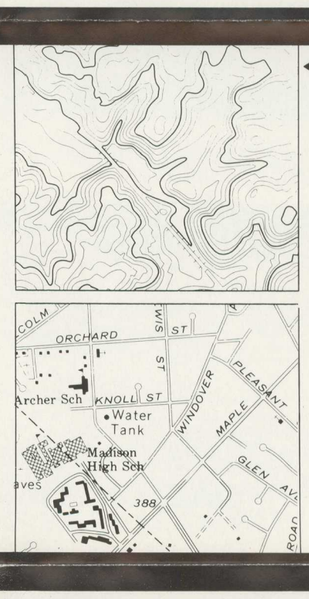


◀ Advance prints

Advance prints are black-and-white diazo prints of USGS topographic maps now in progress.

Examples, depending on stage of progress, are: prints of mapping manuscripts compiled from aerial photos; unedited advance prints (without names), field mapping and checking are complete; partially edited advance prints (with names), final drafting is complete; prints of edited maps, final drafting is complete and names are in place.

The 1:100,000-scale advance prints currently offered for sale are listed in the *Index to Intermediate-Scale Mapping.*



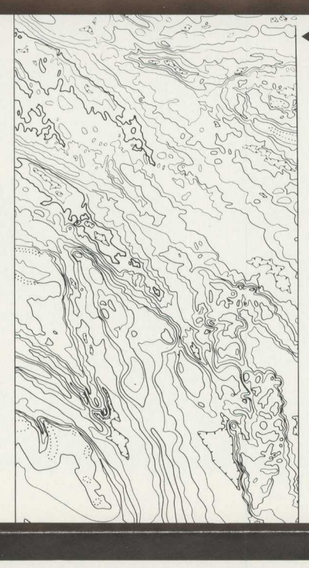
◀ Color separates

Film positives or negatives of each color shown on a USGS topographic map are available. These custom-made films are known as color separates.

On most maps, black represents cultural features and names; blue, water features and names; red, highway classifications, built-up areas, and U.S. public land survey lines; green, areas of woodland, orchards, and vineyards; brown, topographic features; purple, unverified data on photorevised maps.

Two or more separates can be combined on a single film.

Current USGS topographic map names are shown in *State Indexes to Topographic and other Map Coverage.*



◀ Feature separates

The major features in each color on USGS maps are divided into groups called feature separates. For example, individual film positives or negatives are available for water features such as streams, rivers, and lakes; names; symbol patterns for swamp, marsh, and open water; and bathymetric contours. Feature separates can be used to prepare custom map products by eliminating extraneous features.

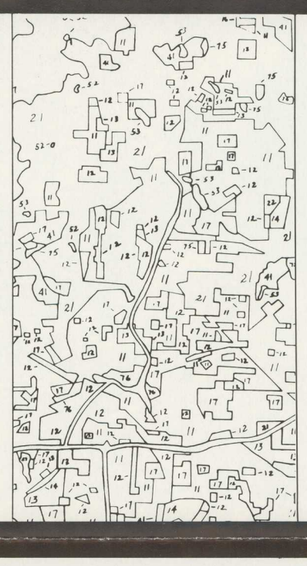
Film materials can be ordered as individual feature separates, or as composites made from two or more feature separates.

Land use and land cover ▶ and associated maps

The USGS is compiling land use and land cover maps of the entire United States at scales of 1:250,000 or 1:100,000.

Land use and land cover data are shown in 9 general categories and 37 subcategories. A set of four associated maps (overlays) of each land use and land cover map shows: political units, hydrologic units, census county subdivisions, and Federal land ownership.

Maps currently available are listed in an *Index to Land Use and Land Cover and Associated Maps.*



Orthophotoquads ▶

Orthophotoquads are black-and-white photoimages in standard USGS quadrangle format. They can be used as map substitutes for unmapped areas and for areas in need of revision. Valuable complements to published maps, they can be used as bases for preparing special-purpose maps.

Cartographic treatment is limited on orthophotoquads, and contours are not shown.

Orthophotoquads are available as unpublished diazo paper prints.

USGS orthophoto coverage is shown in the national *Index to Orthophoto Mapping*, published annually, and by quadrangle names in *State Catalogs of Topographic and Other Published Maps.*

Aerial photographs from ▶ mapping projects

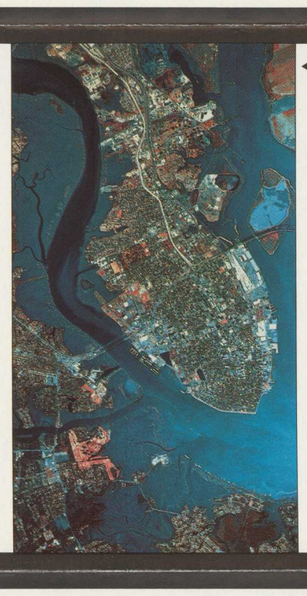
Contact prints or enlargements of cartographic quality aerial photographs are available from the USGS, other Government agencies, and commercial mapping companies. Because of their intended use for mapping, the photographs usually overlap for stereocompilation and provide continuous coverage of large areas.

Both prints and transparencies in various sizes are available.

Shelf stock is not maintained; each order is separately processed.

Aerial photographs from ▶ National programs

Aerial photographs being collected through coordinated Federal programs have uniform specifications and quality. During the National High Altitude Photography (NHAP) Program (1980-86), all the conterminous States were photographed in both black and white and color infrared (CIR) during leaf-off conditions (NHAP I), and some during leaf-on (NHAP II). Under the National Aerial Photography Program (NAPP) begun in 1987, CIR and black-and-white photographs are being collected for the conterminous States. Alaska High Altitude Aerial Photography (AHAP) is also available.



◀ Aerial photographs of major U.S. cities

Preselected color and color-infrared photographs are available of more than 100 major U.S. metropolitan areas.

The selection of photographs was made from NHAP, NAPP, and NASA aerial photographs.

Color paper prints are available in sizes ranging from 9" x 9" to 36" x 36".

Shelf stock is not maintained; each order is separately processed.

◀ Photographs of the Earth from the space shuttle

Photographs of the Earth taken during NASA space-shuttle missions by astronauts using hand-held cameras are available. Specific sites of scientific and special interest have been photographed.

Shelf stock is not maintained; each order is separately processed.

Landsat data

Landsat provides repetitive coverage of the Earth's surface in several visible and infrared bands of the spectrum.

Black-and-white and false-color composite photographic prints and computer compatible tapes (CCT's) are available.

As a result of the Land Remote Sensing Commercialization Act of 1984, Landsat data are currently acquired, processed, and distributed by the Earth Observation Satellite Company (EOSAT). Older (2 years or more) Multispectral Scanner (MSS) data is currently available through ESIC.

Side-looking airborne radar ▶ data

Side-looking airborne radar (SLAR) data are available for selected USGS project areas in the conterminous United States and Alaska.

SLAR data products available from the USGS include contact strip images, photo or diazo prints of radar mosaics of most of the project areas, and digital data for a few selected areas. Indexes (on paper, film, or microfiche) are available.

Shelf stock is not maintained; each order is separately processed.

Geodetic control data

Descriptive lists. The results of USGS monumented control surveys are published and sold as tabulated lists. Each list covers a 15-minute quadrangle.

Photoindexes

Some 60,000 photoindexes are available for almost all USGS aerial photographs used for mapping except NHAP and NAPP photographs. The indexes are photographic reductions of aerial photographs that have been assembled to cover standard 7.5-, 15-, and 30-minute quadrangle blocks. Individual exposures, not accessible by reference to the Aerial Photography Summary Record System (APSRS), can be readily identified and selected from a photoindex.

Shelf stock is not maintained; each order for a photographic paper copy of a photoindex is separately processed.

Microfilm

The USGS has available microfilm copies of USGS photoindexes; NASA aerial photographs; Apollo, Skylab, and Gemini photographs; shuttle photographs; and other remotely sensed data stored at the EROS Data Center.

Rolls of 16-mm film are available in black and white and can be used to set up browse files or to acquire blocks of data for general research.

Micrographic indexes

Micrographic indexes provide a low-cost accurate source of information, and they facilitate independent geographic searches to identify individual photographs. The indexes show available photographic coverage plotted on maps.

Micrographic indexes are available on 105- x 148-mm (4.134" x 5.827") microfiche for NHAP, NAPP, and other USGS and NASA aerial photographs, and for manned spacecraft photographs. The microfiche show the photographic dates, frame numbers, scales, film types, and holding agencies.

Computerized searches

The USGS has a geographic search and inquiry system for satellite images and shuttle photographs. A computerized search can be made upon request to locate available photographs and images of a specified area.

The result of the search is a computer listing of available imagery. A decoding template for interpreting the computer printout is also provided.

Aerial Photography Summary Record System

The Aerial Photography Summary Record System (APSRS) is an ESIC operated computerized data bank describing the holdings of major Government agencies and of commercial mapping companies.

APSRS offers a simple and inexpensive method to determine not only whether aerial coverage is available over a particular geographic location, but whose photographic project it was, the conditions (such as cloud cover) under which the photographs were obtained, what kind of photographic specifications were used (film emulsion and camera focal length), and who now holds the film.

Map and Chart Information System

The Map and Chart Information System (MCIS) is a computerized system operated by ESIC to provide information about maps and charts by using various identifiers, such as area, name of the map, geographic coordinates, dates of the original survey, and publisher.

MCIS information is available in two forms: (1) microfiche copies of map records that can be accessed by map name or by latitude-longitude and (2) custom computer printouts of map records to meet a user's requirements.

Cartographic Catalog

The Cartographic Catalog provides bibliographic descriptions of cartographic products held by Government agencies and by private companies. The system contains information about maps and charts; aerial photographs and satellite images; geodetic control data; map data in digital form; cartographic applications software; and books, indexes, reports, and studies related to cartography and geography.

Cartographic Catalog information is available in custom sorted computer printouts of records and in volumes* showing sources for digital map data and cartographic applications software.

**Sources for Digital Spatial Data* and *Sources for Software for Computer Mapping and Related Disciplines.*

Catalog of Cartographic Data

U.S. Department of the Interior
U.S. Geological Survey

For additional information, write or phone any Earth Science Information Center (ESIC) or call 1-800-USA-MAPS.

July 1991